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10/639,925	08/12/2003	Dirk Preikszas	920602-94605	6666

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EXAMINER	
LE, TOAN M	
ART UNIT	**PAPER NUMBER**
2863	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/639,925	PREIKSAS ET AL.	
	Examiner	Art Unit	
	Toan M. Le	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-18 and 20-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-18 and 20-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 July 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/3/06 has been entered.

Claim Objections

Claim 21 recites the limitation "the electron microscope" in line 17. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the alignment coils" in line 18. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-18, and 20-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Kokubo et al. (US Patent No. 4,871,912).

Referring to claim 1, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, the instrument also having a

memory 30/37 (figure 1) for storing a number of possible values of the further operating parameter, each said value corresponding to a respective possible value of the user controllable parameter, a selector 33/42 (figure 1) for selecting one of said stored possible values for the further parameter and controlling the instrument accordingly, a tuner for enabling a user to alter the selected value, and updating apparatus 31 (figure 1) for updating the memory accordingly, so that the adjusted value of the further operating parameter is selected from the memory if the same value of user controllable parameter is then chosen again (col. 3, lines 63-68 to col. 4, lines 1-41), wherein the instrument is operable to enable the user to select an intermediate value of the user controllable operating parameter between two of the values for which there are corresponding entries in the memory for the further parameter values, the selector being operable to interpolate the values of the further parameter given at those entries to select a value of the further parameter corresponding to the intermediate value of the controllable parameter (col. 4, lines 42-68 to col. 5, lines 1-9).

As to claim 3, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the updating apparatus is such that if the selected, interpolated further parameter value is adjusted, the updating apparatus is operable to update each of the two values in the memory means so that the interpolation would have yielded the adjusted value in response to the selection of the same intermediate value of user controllable parameter had this occurred after the updating (col. 4, lines 42-68 to col. 5, lines 1-45).

Referring to claim 4, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which if the selected, interpolated further parameter is updated, only the two values in the memory updated (col. 4, lines 42-68 to col. 5, lines 1-45).

As to claim 5, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the stored values of the further parameter are arranged in thememory in an index in which the stored values are arranged in an order corresponding to progressively changing values of the associated user controlled parameter (col. 4, lines 42-68 to col. 5, lines 1-45).

Referring to claim 6, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the further operating parameter is one of a plurality of such parameter, values for all of which are stored in the memory (col. 4, lines 42-68 to col. 5, lines 1-45).

As to claim 7, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the instrument is a charged particle beam instrument having a beam generator for generating charged particles and for subjecting the particle to an accelerating voltage to create a beam, and an alignment element for controlling the alignment of the beam, wherein the accelerating voltage constitutes the user

controllable parameter and the further operating parameter comprises a setting for the alignment element (col. 3, lines 29-37 and lines 63-68 to col. 4, lines 1-10).

Referring to claim 8, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the alignment element is a magnetic coil, and the associated further parameter is the value or relative value of current passed through the coil (col. 3, lines 29-37).

Referring to claim 9, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the alignment element is an electrode the value of the associated parameter being the voltage applied to the electrode (col. 3, lines 29-39).

As to claim 10, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the instrument has a plurality of different alignment coils, and the further operating parameters comprise the currents in the coils or the relative current magnitudes in the coils (col. 3, lines 29-39).

Referring to claim 11, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the charged particle beam instrument is a scanning electron microscope, the beam generating means, comprising an electron gun having a cathode and an extraction electrode to which said accelerating voltage is

applied, the alignment coils acting as gun alignment coils for controlling the alignment of the beam onto an electron optical axis of the microscope (col. 3, lines 9-39).

As to claim 12, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the electron microscope includes a plurality of apertures in the path of a beam to be generated by the beam generating means, wherein the alignment coils are operable to direct the beam through any selected one of the apertures (col. 3, lines 9-39).

Referring to claim 13, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the magnitude of the accelerating voltage comprises one of a plurality of user controllable parameters, another such parameter being constituted by the identity of the aperture through which the beam is to pass (col. 5, lines 19-46).

As to claim 14, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the stored values are arranged in a list in which each value is identified by a respective index code representative of the combination of accelerating voltage and aperture identify for which the stored value of alignment coil current or relative current at that entry applies (col. 3, lines 38-55).

Referring to claim 15, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least

partially dependent on that of said user controllable parameter, wherein the list is part of a look-up table in which, for each index code, there are also stored values for additional further parameters applicable to the respective combination of aperture identity and accelerating voltage (col. 3, lines 38-55).

As to claim 16, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the instrument includes stigmator coils for correcting the distortion of the electron beam, the current for each such coil constituting a respective additional further parameter (col. 3, lines 38-55; col. 4, lines 21-27).

Referring to claim 17, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, in which the instrument has a number of operating modes, each of which constitutes a user controllable parameter, the index code also being representative of the state of at least one of the operating modes (col. 3, lines 38-55).

As to claim 18, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter, wherein the instrument is a scanning charged particle beam instrument having a gun for generating the beam of charged particles, a plurality of apertures through any selected one of which the beam may pass, an accelerating electrode to which a voltage is applied to accelerate the particles away from the gun, and at least one alignment element for directing the beam through the selected aperture, wherein the further

parameter values which are stored in a memory comprise values for the settings of the alignment element dependent on the voltage applied to the accelerating electrode and the choice of aperture (col. 3, lines 9-55).

Referring to claim 20, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, the instrument also having a memory 30/37 (figure 1) for storing a number of possible values of the further operating parameter, each value corresponding to a respective possible value of the user controllable parameter, a selector 33/42 (figure 1) for selecting one of the stored possible values for the further parameter and controlling the instrument accordingly, a tuner for enabling a user to alter the selected value, and updating apparatus 31 (figure 1) for updating the memory accordingly, so that the adjusted value of the further operating parameter is selected from the memory if the same value of user controllable parameter is then chosen again (col. 3, lines 63-68 to col. 4, lines 1-41), wherein the stored values of the further parameter are arranged in the memory in an index in which the stored values are arranged in an order corresponding to progressively changing values of the associated user controllable parameter (col. 3, lines 46-55; col. 4, lines 42-68 to col. 5, lines 1-45).

As to claim 21, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, the instrument also having a memory 30/37 (figure 1) for storing a number of possible values of the further operating parameter, each value corresponding to a respective possible value of the user controllable parameter, a selector 33/42

(figure 1) for selecting one of the stored possible values for the further parameter and controlling the instrument accordingly, a tuner for enabling a user to alter the selected value, and updating apparatus 31 (figure 1) for updating the memory accordingly, so that the adjusted value of the further operating parameter is selected from the memory if the same value of user controllable parameter is then chosen again (col. 3, lines 63-68 to col. 4, lines 1-41), wherein the instrument is a charged particle beam instrument having a beam generator for generating charged particle and for subjecting the particles to an accelerating voltage to create a beam, and a alignment element for controlling the alignment of the beam, wherein the accelerating voltage constitutes the user controllable parameter and the further operating parameter comprises a setting for the alignment element, the electron microscope includes a plurality of apertures in the path of a beam to be generated by the beam generator, the alignment coils being operable to direct the beam through any selected one of the apertures and wherein the stored values are arranged in a list in which each value is identified by a respective index code representative of the combination of accelerating voltage and aperture identity for which the stored value of alignment coil current or relative current at that entry applies (col. 3, lines 9-55).

Referring to claim 22, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the instrument is a charged particle beam instrument having beam generating means for generating charged particles and for subjecting the particle to an accelerating voltage to create a beam, and an alignment element for controlling the alignment of the beam, wherein the accelerating voltage constitutes

the user controllable parameter and the further operating parameter comprises a setting for the alignment element (col. 3, lines 9-55).

As to claim 23, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the charged particle beam instrument is a scanning electron microscope, the beam generating means, comprising an electron gun having a cathode and an extraction electrode to which the accelerating voltage is applied, the alignment coils acting as gun alignment coils for controlling the alignment of the beam onto an electron optical axis of the microscope (col. 3, lines 9-55).

Referring to claim 24, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the electron microscope includes a plurality of apertures in the path of a beam to be generated by the beam generating means, wherein the alignment coils are operable to direct the beam through any selected one of the apertures (col. 3, lines 9-55).

As to claim 25, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the magnitude of the accelerating voltage comprises one of a plurality of user controllable parameters, another such parameter being constituted by the identity of the aperture through which the beam is to pass (col. 3, lines 63-68 to col. 4, lines 1-10).

Referring to claim 26, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the stored values are arranged in a list in which each the value is identified by a respective index code representative of the combination of accelerating voltage and aperture identity for which the stored value of alignment coil current or relative current at that entry applies (col. 3, lines 38-55).

As to claim 27, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the list is part of a look-up table, for each index code, there are also stored values for additional parameters applicable to the respective combination of aperture identity and accelerating voltage (col. 3, lines 38-55).

Referring to claim 28, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the instrument includes stigmator coils for correcting the distortion of the electron beam, the current for each such coil constituting a respective additional further parameter (col. 3, lines 38-55; col. 4, lines 21-27).

As to claim 29, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, wherein the list is part of look-up table in which, for each index code, there are also stored values for additional parameters applicable to the respective combination of aperture identity in accelerating voltage (col. 3, lines 38-55).

Referring to claim 30, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the instrument includes stigmator coils for correcting the distortion of the electron beam, the current for each such coil constituting a respective additional further parameter (col. 3, lines 38-55; col. 4, lines 21-27).

As to claim 31, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, the instrument also having a memory 30/37 (figure 1) for storing a number of possible values of the further operating parameter, each value corresponding to a respective possible value of the user controllable parameter, a selector 33/42 (figure 1) for selecting one of the stored possible values for the further parameter and controlling the instrument accordingly, a tuner for enabling a user to alter the selected value, and updating apparatus 31 (figure 1) for updating the memory accordingly, so that the adjusted value of the further operating parameter is selected from the memory if the same value of user controllable parameter is then chosen again, wherein the instrument is a charged particle beam instrument having a beam generator for generating charged particle and for subjecting the particles to an accelerating voltage to create a beam, and a alignment element for controlling the alignment of the beam, wherein the accelerating voltage constitutes the user controllable parameter and the further operating parameter comprises a setting for the alignment coils, and wherein the charged particle beam instrument is a scanning electron microscope, the beam generating means, comprising an electron gun having a cathode and an extraction electrode to which the accelerating voltage is applied, the alignment coils acting as gun alignment coils for controlling

the alignment of the beam onto an electron optical axis of the microscope, and in which the instrument has a number of operating modes, each of which constitutes a user controllable parameter, an index code also being representative of the state of at least one of the operating modes (col. 3, lines 63-68 to col. 4, lines 1-41).

Referring to claim 32, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the electron microscope includes a plurality of apertures in the path of a beam to be generated by the beam generating means, wherein the alignment coils are operable to direct the beam through any selected one of the apertures (col. 3, lines 9-39).

As to claim 33, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the magnitude of the accelerating voltage comprises one of a plurality of user controllable parameters, another such parameter being constituted by the identity of the aperture through which the beam is to pass (col. 5, lines 19-46).

Referring to claim 34, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the stored values are arranged in a list in which each value is identified by a respective index code representative of the combination of accelerating voltage and aperture identify for which the stored value of alignment coil current or relative current at that entry applies (col. 3, lines 38-55).

As to claim 35, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the list is part of a look-up table in which, for each index code, there are also stored values for additional further parameters applicable to the respective combination of aperture identity and accelerating voltage (col. 3, lines 38-55).

Referring to claim 36, Kokubo et al. disclose an instrument having a user controllable operating parameter and at least one further operating parameter having a required value at least partially dependent on that of the user controllable parameter, in which the instrument includes stigmator coils for correcting the distortion of the electron beam, the current for each such coil constituting a respective additional further parameter (col. 3, lines 38-55; col. 4, lines 21-27).

Response to Arguments

Applicant's arguments with respect to claims 1, 3-18, and 20-36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan M. Le whose telephone number is (571) 272-2276. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Toan Le

December 22, 2006

JOHN E. BARLOW, JR.
PRIMARY EXAMINER
GROUP 2800